Applicant: Erik Buntinx

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## Amendments to the Claims:

Please cancel claims 1-40 without disclaimer or prejudice to applicant's right to pursue the subject matter of these claims in a future continuation or divisional application.

Please add new claims 41-91 as set forth below.

## 1-40. Canceled

- (New) A method for treating neurodegenerative diseases or disorders 41. comprising administering to a patient a first compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, comprising administering said compound simultaneously with, separate from or prior to administering a second compound to the patient to augment the therapeutic effect or to provide a faster onset of the therapeutic effect of said second compound.
- 42. (New) The method of claim 41, wherein said first compound is pipamperone.
- 43. (New) The method of claim 42, wherein said first compound is administered to the patient in a dose ranging between 5 and 15 mg of the active ingredient.

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44. (New) The method of claim 41, wherein said second compound has a therapeutic effect on Parkinson Disease.

- 45. (New) The method of claim 41, wherein said first compound is administered daily at least one day before administering said second compound.
- 46. (New) The method of claim 41, wherein said second compound is a dopamine receptor agonist.
- 47. (New) The method of claim 46, wherein said dopamine receptor agonist is selected from the group consisting of amantadine, bromocriptine, cabergoline lisuride, pergolide, ropinirole and pramipexole, or a pro-drug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- 48. (New) The method of claim 47, wherein said dopamine receptor agonist is pergolide and is administered in a dose ranging between 0.5 and 10 mg of the active ingredient.
  - 49. (New) A pharmaceutical composition comprising:
- (a) a compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, and
- (b) a dopamine receptor agonist, as a combined preparation for simultaneous, separate or sequential use for treating a

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neurodegenerative disease or disorder such as Parkinson Disease.

- 50. (New) A pharmaceutical composition comprising:
- (a) pipamperone in a dose ranging between 5 to 15 mg of the active ingredient, and
- (b) pergolide in a dose ranging between 0.5 and 10 mg of the active ingredient, as a combined preparation for simultaneous, separate or sequential use for treating a neurodegenerative disease or disorder such as Parkinson Disease.
- 51. (New) The method of claim 41, wherein said second compound is levodopa associated with a decarboxylase inhibitor.
- 52. (New) The method of claim 51, wherein said levodopa/decarboxylase-inhibitor is selected from the group consisting of levodopa/carbidopa and levodopa/benserazide, or a prodrug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- 53. (New) The method of claim 52, wherein said levodopa/decarboxylase-inhibitor is levodopa/carbidopa and is administered in a dose ranging between 2000 mg/200 mg and 100 mg/10 mg of the active ingredients.
  - 54. (New) A pharmaceutical composition comprising:
- (a) a compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8

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towards other 5HT receptors, and

(b) a levodopa associated with a decarboxylase inhibitor, as a combined preparation for simultaneous, separate or sequential use for treating a neurodegenerative disease or disorder such as Parkinson Disease.

- 55. (New) A pharmaceutical composition comprising:
- (a) pipamperone in a dose ranging between 5 and 15 mg of the active ingredient, and
- (b) levodopa/carbidopa in a dose ranging between 2000 mg/ 200 mg and 100 mg/ 10 mg of the active ingredients,

as a combined preparation for simultaneous, separate or sequential use for treating a neurodegenerative disease or disorder such as Parkinson Disease.

- 56. (New) The method of claim 41, wherein said second compound is a monoamine oxidase B (MAO-B) inhibitor.
- 57. (New) The method of claim 56, wherein said second compound is selegilinehydrochloride or a pro-drug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- 58. (New) The method of claim 57, wherein said selegilinehydrochloride is administered in a dose ranging between 2 and 25 mg of the active ingredient.
  - 59. (New) A pharmaceutical composition comprising:
- (a) a compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8

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towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, and

(b) a mono-amine oxidase B (MAO-B) inhibitor,

as a combined preparation for simultaneous, separate or sequential use for treating a neurodegenerative disease or disorder such as Parkinson Disease.

- 60. (New) A pharmaceutical composition comprising:
- (a) pipamperone in a dose ranging between 5 and 15 mg of the active ingredient, and
- (b) selegilinehydrochloride is administered in a dose ranging between 2 and 25 mg of the active ingredient,

as a combined preparation for simultaneous, separate or sequential use for treating a neurodegenerative disease or disorder such as Parkinson Disease.

61. (New) A method for treating a neurodegenerative disease or disorder comprising administering to a patient (a) a first compound having a selective affinity for the D4 receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, (b) a second compound having a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, and (c) a third compound, wherein said first and second compounds are administered simultaneously with, separate from or prior to administering said third compound to the patient to augment the therapeutic effect or to provide a faster onset of the therapeutic effect of said third compound.

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62. (New) The method of claim 61, wherein said third compound has a therapeutic effect on Parkinson Disease.

- 63. (New) The method of claim 61, wherein said first compound is selected from the group consisting of pipamperone, fananserin, L-745,870, PNU-101387G and U-101387, or a pro-drug or a pharmaceutically acceptable salt thereof, and wherein said second compound is selected from the group comprising pipamperone, fananserin, ORG 5222, zotepine, olanzepine, clozapine, S16924, S18327, amperozide, serindole, MDL 100.907, tiospirone, fluspirilene, ocaperidone, risperidone, paliperidone and ziprasidone, or a prodrug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- 64. (New) The method of claim 61, wherein said compounds are administered to a patient in a dose ranging between 0.5  $\mu$ g and 2000 mg for each of the active ingredients.
- 65. (New) The method of claim 61, wherein said third compound is a dopamine receptor agonist.
- 66. (New) The method of claim 65, wherein said dopamine receptor agonist is selected from the group consisting of amantadine, bromocriptine, cabergoline lisuride, pergolide, ropinirole and pramipexole, or a pro-drug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- 67. (New) The method of claim 66, wherein said dopamine receptor agonist is pergolide and is administered in a dose ranging between 0.5 and 10 mg of the active

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ingredient.

- 68. (New) A pharmaceutical composition comprising:
- (a) a compound having a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors,
- (b) a compound having a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, and
- (c) a dopamine receptor agonist, as a combined preparation for simultaneous, separate or sequential use for treating a neurodegenerative disease or disorder such as Parkinson Disease.
- 69. (New) The method of claim 61, wherein said third compound is levodopa associated with a decarboxylase inhibitor.
- 70. (New) The method of claim 69 wherein said levodopa/decarboxylase-inhibitor is selected from the group comprising levodopa/carbidopa, levodopa/benserazide, or a pro-drug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- 71. (New) The method of claim 70, wherein said levodopa/decarboxylase-inhibitor is levodopa/carbidopa and is administered in a dose ranging between 2000 mg/200 mg and 100 mg/10 mg of the active ingredients.
  - 72. (New) A pharmaceutical composition comprising:

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(a) a compound having a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other

Dopamine receptors,

(b) a compound having a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards

other 5HT receptors, and

(c) levodopa associated with a decarboxylase inhibitor,

as a combined preparation for simultaneous, separate or sequential use for treating a

neurodegenerative disease or disorder such as Parkinson Disease.

73. (New) The method of claim 61, wherein said third compound is a mono-

amine oxidase B (MAO-B) inhibitor.

74. (New) The method of claim 73, wherein said mono-amine oxidase B (MAO-

B) inhibitor is selegelinehydrochloride or a pro-drug or an active metabolite thereof, or a

pharmaceutically acceptable salt thereof.

75. (New) The method of claim 74, wherein selegilinehydrochloride is

administered in a dose ranging between 2 and 25 mg of the active ingredient.

76. (New) A pharmaceutical composition comprising:

(a) a compound having a selective affinity for the Dopamine-4 (D4) receptor with a

pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other

Dopamine receptors,

(b) a compound having selective affinity for the 5-HT2A receptor with a pKi value

equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT

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receptors, and

- (c) a mono-amine oxidase B (MAO-B) inhibitor, as a combined preparation for simultaneous, separate or sequential use for treating a neurodegenerative disease or disorder such as Parkinson Disease.
- 77. (New) A method for treating a cognitive disease or disorder comprising administering to a patient a compound as defined in claim 41 where the compound is administered simultaneously with, separate from or sequential to administering a cholinesterase inhibitor to the patient to augment the therapeutic effect or to provide a faster onset of the therapeutic effect of said cholinesterase inhibitor.
- 78. (New) A method for treating a cognitive disease or disorder comprising administering to a patient a first compound and a second compound as defined in claim 61 where said compounds are administered simultaneously with, separate from or sequential to administering a cholinesterase inhibitor to the patient to augment the therapeutic effect or to provide a faster onset of the therapeutic effect of said cholinesterase inhibitor.
- 79. (New) The method of claim 77, wherein said disease or disorder is selected from the group consisting of delirium; dementia, such as Alzheimer Disease, substance-induced persisting dementia, vascular dementia, dementia due to a general medical condition selected from the group comprising HIV disease, head trauma, Parkinson Disease, Huntington Disease, Pick Disease and Creutzfeldt-Jacob Disease; amnestic disorders due to a general medical condition or a substance-induced persisting amnestic disorder; mild cognitive impairment disorder; and other cognitive disorders.

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- 80. (New) The method of claim 78, wherein said disease or disorder is selected from the group consisting of delirium; dementia, such as Alzheimer Disease, substanceinduced persisting dementia, vascular dementia, dementia due to a general medical condition selected from the group comprising HIV disease, head trauma, Parkinson Disease, Huntington Disease, Pick Disease and Creutzfeldt-Jacob Disease; amnestic disorders due to a general medical condition or a substance-induced persisting amnestic disorder; mild cognitive impairment disorder; and other cognitive disorders.
- 81. (New) The method of claim 77, wherein said cholinesterase inhibitor is selected from the group consisting of donepezil, ENA-713, galantamine, memantine and tacrine, or a pro-drug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- 82. (New) The method of claim 81, wherein said cholinesterase inhibitor is galantamine and is administered in a dose ranging between 5 and 50 mg of the active ingredient.
- 83. (New) The method of claim 78, wherein said cholinesterase inhibitor is selected from the group consisting of donepezil, ENA-713, galantamine, memantine and tacrine, or a pro-drug or an active metabolite thereof, or a pharmaceutically acceptable salt thereof.
- (New) The method of claim 83, wherein said cholinesterase inhibitor is 84. galantamine and is administered in a dose ranging between 5 and 50 mg of the active ingredient.

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- 85. (New) A pharmaceutical composition comprising:
- (a) a compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, and
- (b) a cholinesterase inhibitor, as a combined preparation for simultaneous, separate or sequential use for treating a cognitive disease or disorder as defined in claim 79.
  - 86. (New) A pharmaceutical composition comprising:
- (a) a compound having a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors,
- (b) a compound having a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, and
- (c) a cholinesterase inhibitor, as a combined preparation for simultaneous, separate or sequential use for treating a cognitive disease or disorder as defined in claim 79.
  - 87. (New) A pharmaceutical composition comprising:
- (a) pipamperone in a dose ranging between 5 and 15 mg of the active ingredient, and
- (b) galantamine in a dose ranging between 5 and 50 mg of the active ingredient, as a combined preparation for simultaneous, separate or sequential use for treating a

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cognitive disease or disorder as defined in claim 79.

- 88. (New) A pharmaceutical composition according to claim 49, wherein said compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, is pipamperone and is present in the composition in a dose ranging between 5 and 15 mg of active ingredient, expressed as the daily dose administered to a patient in need thereof.
- 89. (New) A pharmaceutical composition according to claim 54, wherein said compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, is pipamperone and is present in the composition in a dose ranging between 5 and 15 mg of active ingredient, expressed as the daily dose administered to a patient in need thereof.
- 90. (New) A pharmaceutical composition according to claim 59, wherein said compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, is pipamperone and is present in the composition in a dose ranging between 5

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and 15 mg of active ingredient, expressed as the daily dose administered to a patient in need thereof.

91. (New) A pharmaceutical composition according to claim 85, wherein said compound having (i) a selective affinity for the Dopamine-4 (D4) receptor with a pKi value equal to or higher than 8 towards the D4 receptor and less than 8 towards other Dopamine receptors, and (ii) a selective affinity for the 5-HT2A receptor with a pKi value equal to or higher than 8 towards the 5-HT2A receptor and less than 8 towards other 5HT receptors, is pipamperone and is present in the composition in a dose ranging between 5 and 15 mg of active ingredient, expressed as the daily dose administered to a patient in need thereof.